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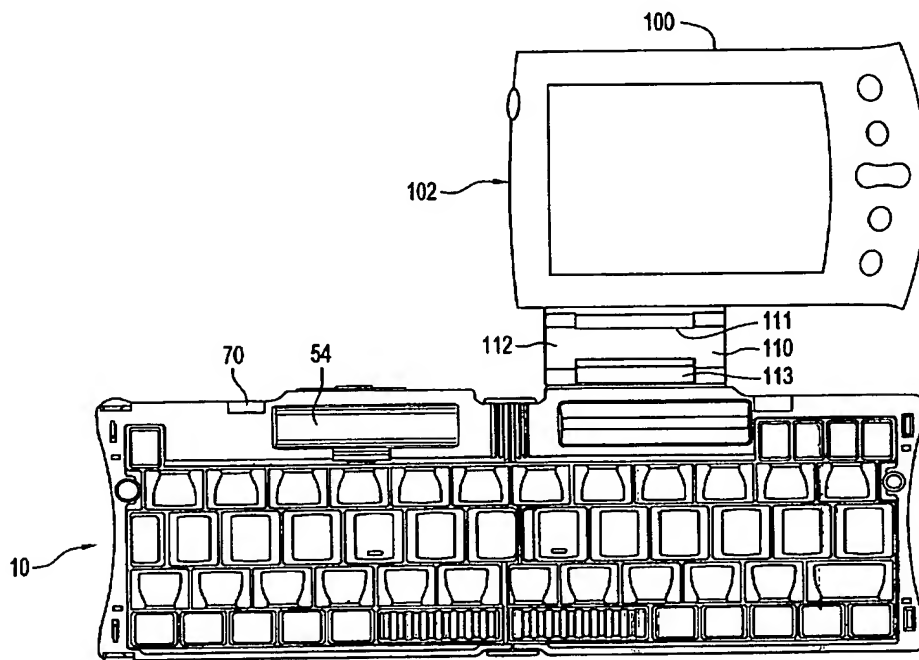
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2,366,636 4 January 2002 (04.01.2002) CA
- (71) Applicant (for all designated States except US):
THE POCKETOP COMPUTER CORPORATION
[CA/CA]; 302-1505 West 2nd Avenue, Vancouver, British
Columbia V6H 3Y4 (CA).
- (72) Inventor; and
- (75) Inventor/Applicant (for US only): **KATZ, Michael**
[CA/CA]; 105 West 18th Avenue, Vancouver, British
Columbia V5Y 2A6 (CA).
- (74) Agent: **GREEN, Bruce, M.**; Oyen Wiggs Green & Mu-
tala, 480-601 West Cordova Street, Vancouver, British Col-
umbia V6B 1G1 (CA).
- (81) Designated States (national): AE, AG, AL, AM, AT, AU,
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CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW,
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ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI,
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GQ, GW, ML, MR, NE, SN, TD, TG).

[Continued on next page]

(54) Title: WIRELESS KEYBOARD FOR HAND-HELD COMPUTERS



(57) Abstract: Prior collapsible keyboards for personal digital assistants are overly complex and require different connecting hardware for different handheld devices. The present invention provides a folding keyboard for a hand-held computer or other information processing devices which folds up simply and in a small size and which is useful for touch typists. It communicates with the handheld device by a wireless connection which allows a single keyboard to be used with multiple types of handheld devices.

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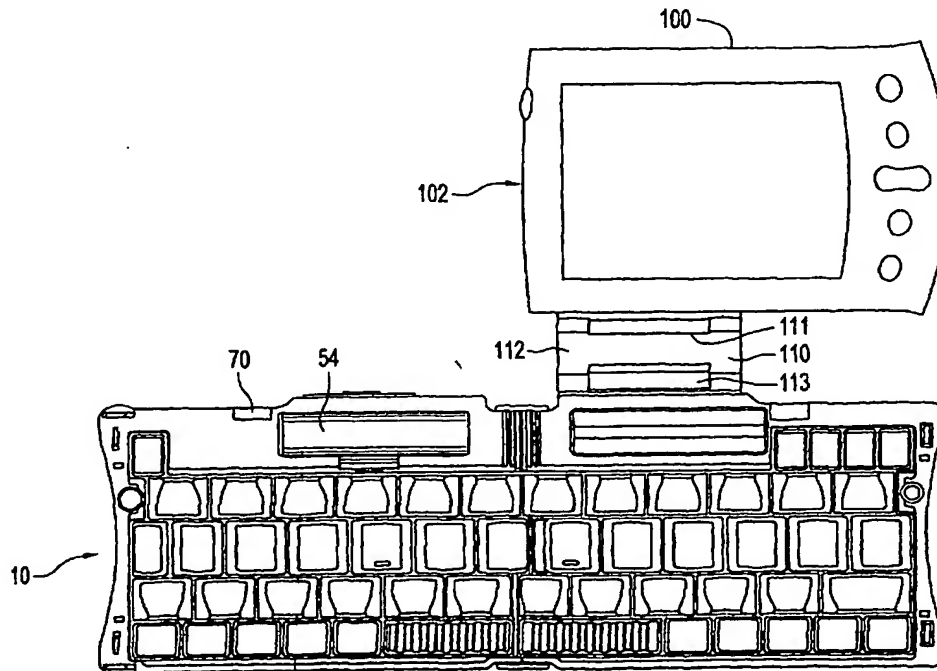
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LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW,
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European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE,
ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI,
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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 G06F3/023 G06F3/02 G06F1/16

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 G06F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EP0-Internal, WPI Data, PAJ, IBM-TDB

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 00/60438 A (THINK OUTSIDE) 12 October 2000 (2000-10-12) page 9, line 4 - page 15, line 2 page 23, line 22 - page 24, line 21 page 35, lines 4-20 figures 1,3-5B,16	1-3
A	-----	9
X	FR 2 799 017 A (SATIT) 30 March 2001 (2001-03-30) page 4, line 1 - page 5, line 9 page 6, line 32 - page 7, line 31 figures 1-8 ----- -/--	1,2

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents :

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

- "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- "&" document member of the same patent family

Date of the actual completion of the international search

12 March 2004

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17. 06. 2004

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Baldan, M

INTERNATIONAL SEARCH REPORT

International Application No.

PCT/CA/000004

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 708 458 A (VRBANAC MICHAEL E) 13 January 1998 (1998-01-13) column 1, lines 18-28 column 4, lines 1-39 column 6, lines 6-14 figures 2,4	1,3
A	-----	8
A	US 6 104 606 A (VOSSLER STEPHEN P) 15 August 2000 (2000-08-15) column 4, line 44 - column 6, line 34 column 6, line 59 - column 7, line 59 figures 1-6,8-10	1,2,4
A	----- US 5 307 297 A (YAMANAKA YASUMASA ET AL) 26 April 1994 (1994-04-26) column 3, line 42 - column 4, line 21 column 5, lines 24-29 figures 1,11,12 -----	1,2

INTERNATIONAL SEARCH REPORT

International Application No.
PCT/80/00004

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this International application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

1-20, 47

Remark on Protest

☐ The additional search fees were accompanied by the applicant's protest.

☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-20, 47

A wireless keyboard for use with a handheld computer wherein said handheld computer comprises a wireless communications port, said wireless keyboard comprising a keyboard body having a plurality of keys, a wireless communications port, battery means, and means for supporting said handheld computer in a position whereby said wireless communication ports of the keyboard and handheld computer are able to communicate with one another, wherein said wireless communication ports are infra-red communications ports, wherein said means for supporting comprises a stand on which said handheld computer can be removably mounted, and means for reflecting an infrared signal from said infra-red communications port on said keyboard to said infra-red communications port on said handheld computer.

2. claims: 21-46, 48-49

A folding keyboard comprising a plurality of keys generally corresponding to the keys of a standard personal computer keyboard comprising three parallel, lengthwise rows of keys forming a central row, an upper row and a lower row, and comprising two halves hingedly connected along a fold line extending transversely across said keyboard, each half thereby comprising a portion of said plurality of keys, whereby said keyboard is folded from a first open position in which said plurality of keys forms said generally standard personal computer keyboard, to a closed position in which said two halves are in opposed parallel relationship and wherein said central row comprises keys of standard size, and said upper and lower rows comprise keys which are reduced in size in the transverse direction.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/CA 03/00004

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 0060438	A	12-10-2000	US 6734809 B1 11-05-2004
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